New approach to international migration statistics in Lithuania. Combination of data from labour force survey and population registers

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The paper reviews the efforts and work undertaken by Statistics Lithuania on improving and developing international migration statistics, particularly the use of administrative registers and household surveys.

Despite the fact that Statistics Lithuania had been using the data from the Population Register for demographic and, particularly, for migration statistics, the official register-based statistics was connected only with declared migration and did not reflect the real situation. The combination of household surveys and various administrative data sources, use of statistical methods enable to improve the quality of Lithuanian international migration statistics.

In 2006–2009, Statistics Lithuania carried out an annual Undeclared Emigration Survey, based on the Labour Force Survey, which enabled to assess the number of residents of the country who did not declare their departure during the period of 2001–2008. The survey results showed that only every second/third resident of Lithuania declared his/her departure when emigrating.

The complexity of the issue and a variety of solutions to be addressed stimulate Statistics Lithuania to proceed with the actions on the improvement of international migration statistics, to use population registers, households surveys, Population Census 2011 data and consider it as one of the priorities for the coming years.
1. Migration and challenges of migration statistics

Statisticians in Europe and all over the world are looking for solutions to develop comprehensive tools to measure migration processes and assess the impact of international migration on the world as a whole and each country in particular. One of the important tasks for a national statistical institute (NSI) is to reflect the stocks and flows of international migrants, their demographic and socio-economic characteristics, to estimate the resident population at the regional and local levels, the changing structure and composition of the population, situation in the labour market.

The Regulation of the European Parliament and of the Council on Community statistics on migration and international protection constitutes a major collective achievement of the European Statistical System. The legal basis is a good tool for harmonising the definitions of international migration statistics across EU countries, defining data sources and quality standards. It also provides for an enabling clause stating that other appropriate data sources may be used as part of the statistical process: “scientifically based and well documented statistical methods may be used as the data source for international migration statistics”. This stimulates NSIs and gives an impetus for the whole ESS to look for best solutions aimed at further development of international migration statistics. However, we should not limit ourselves purely to the implementation of the requirements imposed by the Regulation and go beyond that by introducing other appropriate instruments aimed at achieving a better quality of international migration statistics.

2. New developments in international migration statistics in Lithuania

Statistics Lithuania devotes significant attention to the improvement and dissemination of statistical information on international migration. From 2006, comprehensive statistical information on migration processes (the extent and trends of emigration and immigration), as well as on demographic, socio-economic characteristics of migrants, has been prepared on an annual basis. Social and economic factors stimulating the residents of Lithuania to migrate and the consequences of migration processes for the demographic development, labour market, standard of living has been analysed. A list of statistical indicators, defining economic migration processes, has been prepared and approved by a Government resolution.

From 2008, international migration statistics has been produced following an EU regulation and comparable on an international scale. The EU regulation does not provide for the
introduction of new data sources or changing administrative systems, but for the justification of the choice of a data source and explanation of the possible impact of this choice on the compliance with harmonised definitions. In pursuance of this provision, Statistics Lithuania uses various data sources. Data from the central database of the Residents’ Register Service under the Ministry of the Interior of the Republic of Lithuania (hereinafter referred to as the “Population Register”), together with data from the databases of other administrative sources, are considered to be administrative data. Moreover, data from household surveys (additional modules of LFSs) and population censuses are used.

**International migration statistics production process at Statistics Lithuania, 2009**

The Population Register, as a centralised system where every person is registered and his/her entries are regularly updated, is the best source of data on migration flows and the population. Demographic data, as well as data on the declaration of the place of residence, from the Population Register are used. Data on migrants are received in online mode and updated on a daily basis.
2.1 Usage of data from other administrative (population) registers

Statistical information on emigrants according to the former employment status and economic activity of the former workplace is determined by linking personal data from the databases of the Population Register and the database of the State Social Insurance Fund Board under the Ministry of Social Security and Labour (hereinafter referred to as “Sodra”). The following Sodra data are used: date of employment and resigning from a job, economic activity of the enterprise. The interaction between the Sodra database and the Population Register is based on a unique identification code (personal number) of a person.

Some years ago Statistics Lithuania analysed another, alternative possibility for estimating undeclared emigration – by searching for personal data on all permanent residents of Lithuania (hereinafter referred to as “residents”), whose data are stored in the Population Register, in other administrative data sources: Sodra, Labour exchange (job-seekers, unemployed persons), Electoral Register, Compulsory Health Insurance Fund, tax records, Students’, Pupils’ databases, etc.

The purpose of this pilot study was to figure out whether by linking all these administrative registers it would be possible to determine the exact actual number of persons residing in Lithuania at the moment. The pilot study showed that, although the linking of registers is one of the ways for obtaining statistical information on the population, it is not the most suitable way for obtaining accurate data on the population and its actual breakdown by place of residence and other characteristics. One of the reasons for that – the incompatibility of definitions of variables in these administrative data sources. Therefore, a conclusion can be made that even the combination of administrative data sources does not allow achieving sufficient quality of emigration statistics due to deficiencies in them, so other ways and tools have to be introduced.

2.2 Labour Force Survey (LFS) – the basic date source for measuring undeclared migration

Although administrative (population) registers is the most reliable source of data on migration. Efforts have been made to deal with the problem of production of international migration statistics and its quality, related to the estimation of undeclared emigration, using the undeclared migration survey results. Statistics Lithuania decided to launch a Survey on Undeclared Emigration (based on a household survey) in 2005. A methodology for the estimation of undeclared emigration flows was elaborated. The methodology was aimed at
determining the method of data collection and assessing undeclared international migration flows and socio-economic characteristics of emigrants. It was based on a simple assumption that personal records of emigrants who have not declared their departure are available in the database of the Population Register without any changes. Therefore, such persons could be sampled for household surveys.

The Undeclared Emigration Survey was for the first time carried out in the first quarter of 2006. The questions were formulated in such a way that allowed the estimation of undeclared emigration in the period of 2001–2005 (undeclared emigration before 2001 was assessed earlier based on the results of the Population and Housing Census 2001).

It was decided to use a framework of the Labour Force Survey (LFS) by supplementing it with a module on undeclared emigration including questions about persons who had emigrated, their main demographic and socio-economic characteristics (new country of residence, how many years/months ago she/he left Lithuania; age, sex, educational attainment and former employment status before emigration, etc.).

As for the LFS, the number of employed, unemployed, inactive persons and, additionally, emigrants who had not declared their departure had to be estimated using auxiliary information from the demographic statistics database of Statistics Lithuania (population by municipalities, breakdown of the population by sex, age group and urban/rural areas) according to the following assumption:

Every year, after the fieldwork, a database of the Undeclared Emigration Survey is prepared and coded; a sampling method (calibration) has to be used for the evaluation of those who left Lithuania (the estimated time of departure is 12 months and longer). In order to ensure a better quality of the survey, the data obtained are compared (at the personal level, following confidentiality rules) with administrative data sources: Population Register and the Sodra database.
The results of the surveys revealed that only each second/third resident of Lithuania had declared his/her departure when emigrating.

The total estimates of emigration flows are used very broadly by the Lithuanian society and international migration experts. Despite various expert opinions that this estimated figure is used additionally to register-based international migration and demographic statistics, there is a great need to develop specific studies on how to integrate the results of the household survey with demographic statistics, based on registers.

Statistics Lithuania continues to carry out household surveys (based on the LFS) with special modules on undeclared migration. The methodology for the Undeclared Emigration Survey for the 2007-2009 surveys (including a questionnaire) was further developed reflecting user needs and statisticians’ experiences from the previous survey.

In the course of the analysis of declared and undeclared emigration, it was figured out that almost every year the number of undeclared emigrants exceeded that of the declared ones. Undeclared emigration particularly increased in 2005 (the year following the year of Lithuania’s accession to the EU), when the citizens of Lithuania started actively moving to other countries, looking for new experiences, to work or to study. In the said year, the number of undeclared emigrants was almost two times as high as that of the declared ones (32.5 and 15.6 thousand respectively). In the following years, the figures for the both categories of emigrants were similar. Based on the estimates of Statistics Lithuania, in 2008, departure was declared by 17.0 thousand (72 per cent) of emigrants, while 6.7 thousand (28 per cent) did not declare their departure (in 2007, 13.8 thousand, or 52 per cent, and 12.7 thousand, or 48 per cent, respectively).

An additional Immigration Survey focusing on the assessment of undeclared remigration (return migration) flows (since more and more emigrants who have not declared their departure come back to Lithuania) has been developed. Pilot surveys were conducted in 2008 and 2009, in connection with the Labour Force Survey, as this is a usual practice. For this purpose, in 2008, the LFS questionnaire was supplemented with a block of questions on migration: all persons aged 15 and over were asked whether after 2001 they had been living or working abroad. In case a respondent had been away for a year or longer, he/she was asked additional questions about his/her demographic and socio-economic characteristics: the year of departure from and return to the country, employment status and economic activity abroad, main reasons for return.

The results of the migration survey were analysed after quarterly results had been made available.
The percentage share of emigrants and remigrants in the sample is not high; therefore, the estimate of their number in the total population is not accurate, the coefficient of variation (which characterises the dispersion of possible estimates around their average) is high, and the confidence interval is rather wide. Consequently, no statements about the precise number of emigrants and remigrants can be made. Therefore, discussions have been held with users about how to publish (together with metadata; as quality descriptions/reports) and use such undeclared migration data.

2.3 Preparation for the 2011 Population and Housing Census – particular focus on the migration issue

Statistics Lithuania has already started preparatory work for the Population and Housing Census 2011. The topic of migration is of high priority in this area. We expect that the census results will allow the estimation of the usual resident population of the country during the intercensal period, as well as the number of migrants in the country.

A conclusion has been made that due to the high emigration rate, the mismatch between the place of residence which has been declared and that where the person actually lives, it is not possible to use only administrative data in Lithuania; moreover, for national needs, such information on the population is required which is available neither in registers nor in other administrative databases. Therefore, a decision has been made that a traditional enumeration of the population is required as well, i.e. persons should be visited at their dwellings, and census questionnaires should be filled in. A census questionnaire has been supplemented with questions on migration; therefore, it will be possible to estimate not only the number of migrants, but also their demographic, socio-economic characteristics, reasons for migration, countries from which they have immigrated or to which they have emigrated, etc.

Based on administrative data, a pre-census database will be formed, the data from which will be used as persons will be filling in e-census questionnaires online and when interviewing persons.
Vision of Statistics Lithuania for using the data from the 2011 Population and Housing Census in the production of migration statistics

2.4 Future work on the improvement of the availability and quality of international migration statistics in Lithuania using administrative data and household surveys

In the Strategy of Statistics Lithuania for 2008–2012, it is mentioned that the improvement of the quality of international migration statistics remains a top priority which will be displayed in a number of concrete improvement actions:

- To continue labour force surveys for the evaluation of undeclared emigration flows in future. This will allow achieving a better quality of variables related with demographic and socio-economic characteristics of emigrants (age, sex, educational attainment, employment status, etc.).

- One of the biggest challenges faced by the specialists of Statistics Lithuania is the integration of estimates of undeclared migration flows into common migration statistics.
flows (declared and undeclared departures and arrivals) as well as demographic statistics (to recalculate the population, its composition by age, sex and territorial administrative units). Currently, discussions are taking place with demographers and researchers whether this task should be implemented after the 2011 Population and Housing Census. In any case, the surveys on undeclared migration will be continued and serve to make the population figure between the 2001 and 2011 censuses more accurate.

- Statistics Lithuania considers a possibility to use various administrative data sources, linking individual records in order to produce high quality population statistics, especially in case of international migration statistics.

3. Using population registers and household surveys for the measurement of migration – the challenge for the European Statistical System ESS

A number of such challenges are reflected below:

- Continuous dialogues on improving the quality of international migration statistics should serve the purpose of sharing experience and best practices in the countries. Different surveys on migration processes are conducted in the European countries, in particular EU member states, and across the world. The problem is that such surveys usually are tailored to the national interest, and therefore not known to other countries. The results of such surveys are not comparable; sometimes they even contain different information, definitions, etc. However, this experience should be shared at European and international conferences, workshops, seminars for statisticians, which should also involve users. It might be very useful to use other means like creation of special websites which would contain all possible information on practices, experiences, achievements, as well as problems encountered and solutions found. The European Commission website with concrete links to migration statistics (data and methodology) of NSIs of MSs, OECD, UN Statistical Commission, etc. could serve that purpose perfectly well, and such an option should be considered.

- The forthcoming round of the 2011 population and housing censuses will challenge the NSIs to obtain comparable information on the population, its structure, and distribution. The time span until the next census round is very tight, and the countries are already in the preparation stage; however, among other issues, discussions should be initiated on the possibility to exchange primary information at
the micro level between the countries before the validation of final results. Such a possibility would help member states to produce high quality data on the population and migration stocks in every country.

- Another important issue in order to achieve a better quality of international migration statistics should be addressed within the ESS. It is related to the exchange of individual records on migrants between the countries. This is not a simple task and needs to be considered seriously in order to avoid violation of the confidentiality regime and mistrust in statistics. Current action on the revision of the basic legal framework for statistics could serve that purpose.

- Due to a long-lasting decision-making process on the development of the ESS, a temporary solution on exchanging identifiable data on international migration statistics has to be searched for. One of the ways could be strengthening bilateral collaboration between the countries. Bilateral agreements might be a tool for the exchange of identifiable data on migration with the countries to which the flows are considerable, e.g. Lithuania would be interested in the exchange of data with other countries which are the main destination points for Lithuanian emigrants.

- In order to provide users with timely, comparable statistical information, there is a great need to establish continuous monitoring of international migration processes. Special harmonised household surveys or ad hoc modules on migration could be considered and introduced, if appropriate. The Suitland Working Group would operate under the umbrella of the CES Work Plan to Improve International Migration Statistics. Such instruments as handbooks concerning detailed input information on international migration issues etc. might be useful. Moreover, some projects have already been initiated and, presumably, their continuation could be considered.

4. Conclusions
The quality of administrative data sources is often insufficient to meet statisticians’ needs. In such cases, while estimating migration flows, it is necessary to combine the data obtained from these sources with the data from household surveys. This practice has already been introduced in Lithuania for few recent years. It would be expedient to harmonise methodologies of such surveys within the ESS so that individual efforts of some countries would not go to waste if there is no possibility to compare results of surveys conducted by different countries.
The Regulation on migration and international protection statistics provides for a framework for further development of migration statistics. However, it is not sufficient to limit ourselves to the implementation of the requirements of the Regulation. Legislation on the exchange of individual data on migrants between the countries and, in the meanwhile, bilateral agreements in relation to this question, websites on the best practices, establishment of an ESS net, and on the UN level, closer cooperation within the ESS and of the NSIs of the Member States in the field of population statistics and other migration issues could significantly contribute to the improvement of the quality of international migration statistics and satisfaction of increasing user needs.

5. References


http://www.unece.org/stats/documents/2009.03.migration.htm